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REMARKS

Drawings

The drawings have been objected to as set forth in the Draftsperson's Review Form PTO-948 because Figure 6 was missing from the formal drawing set filed with the U.S. Patent and Trademark Office on April 3, 2002. Accordingly, the Applicant has resubmitted formal Figure 6 in a separate paper filed herewith. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

Allowed/Allowable Claims

The Applicant thanks the Examiner for the indication that claims 25-30 are allowed. The Applicant notes that independent claim 25 has been slightly amended to correct a grammatical informality. Additionally, claims 7-9 and 16-18 have been indicated as allowable if rewritten in independent form. To that end, claims 8 and 16 have been rewritten in independent form and are in condition for allowance. Additionally, claim 9 depends from rewritten independent claim 8 and claims 17 and 18 depend from rewritten independent claim 16. Accordingly, claims 8, 9 and 16-18 are all in condition for allowance.

Claim Objections

Claims 11 and 30 have been objected to under 37 CFR 1.75(c) as being in improper dependent form for failing to further limit the subject matter of the previous claim. The Applicant respectfully disagrees with this objection. Specifically, the Applicant would agree that if independent base claims 1 and 25 recited the feature of "partial detachment", then any claim depending therefrom could not refer to the same feature as "complete detachment". Applicant further agrees that it would not be proper to set forth these mutually exclusive features as

occurring in response to application of the same force.

However, the Applicant submits that what is being claimed in independent base claims 1 and 25 is “at least partial detachment”, with dependent claims 11 and 30 reciting “complete detachment”, which clearly constitutes a species of the more generic feature being claimed in independent base claims 1 and 25. In other words, dependent claims 11 and 30 are further defining the more generic feature of “at least partial detachment” recited in the respective base claims 1 and 25. Additionally, since it is possible for the imposition of the same force to result in “at least partial detachment” (the scope of which would include complete detachment) and “complete detachment”, the Applicant submits that claims 11 and 30 are in proper form. Accordingly, withdrawal of the objection to claims 11 and 30 under 37 CFR 1.75(c) is respectfully requested.

Claim Rejections – 35 USC §102

Claims 1-5, 10 and 12-14 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 2,898,926 to Tsijuloff (the “‘926 patent”). Claims 1 and 11 are also rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,156,117 to Deeks (the “‘117 patent”). The Applicant respectively traverses these rejections for at least the following reasons. It is well established that “an invention is anticipated if the same device, including all the claim limitations, is shown in a single prior art reference. Every element of the claimed invention must be literally present, arranged as in the claim.” Richardson v. Suzuki Motor Co. Ltd., 9 USPQ.2d 1913, 1920 (Fed. Cir. 1989).

Independent claim 1 has been cancelled without prejudice for possible submission in a continuing application. Additionally, dependent claim 2 has been rewritten in independent form

and dependent claims 10-14 have been amended to depend from rewritten independent claim 1.

Notably, dependent claim 2 was rejected solely in view of the teachings of the '926 patent.

Rewritten independent claim 2 recites, in pertinent part, a valve housing, a detachable end portion, a valve element disposed within the valve housing and being displaceable between open and closed positions, a biasing element urging the valve element toward the closed position, a retainer element disposed within the valve housing and including a plurality of arm segments engaged against the detachable end portion adjacent the region of reduced strength to initially maintain the valve element in the open position, and wherein imposition of a force onto the detachable end portion results in at least partial detachment from the valve housing along the region of reduced strength and "causing at least one of said plurality of arm segments to disengage said detachable end portion to permit said biasing element to displace said valve element toward said closed position."

The Applicant submits that the '926 patent fails to teach or suggest each and every feature recited in rewritten independent claim 2. For example, the '926 patent fails to teach or suggest that at least partial detachment of a detachable valve portion from the valve housing causes at least one of a plurality of arm segments associated with a retainer element to disengage the detachable end portion to permit a biasing element (e.g., a spring) to displace a valve element toward a closed position. To the contrary, the '926 patent teaches that detachment of the upper portion of the valve results in pivotal movement of the pawl elements 101, which in turn disengage the dished collar 95 from the notched ends 99 of the pawl elements 101 to thereby allow the valve element 61 to close. Even assuming arguendo that the pawl elements 102 comprise a plurality of arm segments associated with a retainer element, the pawl elements 101

remain in engagement with the detachable upper portion of the valve as the valve element 61 is displaced to the closed position illustrated in FIG. 2. Closure of the valve element 61 is effected via the pivotal movement of the pawl elements 101 and disengagement of the pawl elements 101 from the collar 95. Indeed, it is the engagement between the end portions of the pawl elements 101 and the inner surface of the upper portion of the valve that causes the valve element 61 to close, and not the disengagement of the pawl elements 101 from the upper portion of the valve.

As should be appreciated, in comparison to the safety valve recited in independent claim 2, the closure mechanism disclosed in the '926 patent requires an increased number of parts, has an added degree of complexity, and is reliant upon the interaction of multiple parts to effect closure of the valve element 61. As should also be appreciated, each of these factors tends to increase manufacturing costs and decrease control and reliability of valve operation. Notably, the safety valve recited in independent claim 2 is transitioned to a closed position as a direct result of at least partial detachment of a retention element from a detachable end portion of the valve. This simple, yet effective, structural and operational configuration is clearly distinguishable from and patentable over the safety valve disclosed in the '926 patent.

For at least the reasons discussed above, the '926 patent does not anticipate rewritten independent claim 2 because each and every element and feature recited in independent claim 2 is not disclosed therein. Claims 3-7 and 10-14 depend from rewritten independent claim 2 and are patentable for at least the reasons supporting the patentability of independent base claim 2. Accordingly, the Applicant respectfully requests withdrawal of the rejection of rewritten independent claim 2 and claims 3-7 and 10-14 depending therefrom.

Claim Rejections – 35 USC §103

Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over the '926 patent to Tsijuloff. Claims 15 and 19-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over the '926 patent to Tsijuloff in view of U.S. Patent No. 4,077,422 to Brinkley et al. The Applicant respectively traverses these rejections for at least the following reasons.

Claim 6 depends from rewritten independent claim 2 and is therefore patentable for at least the reasons supporting the patentability of independent base claim 6.

Independent claim 15 has been cancelled without prejudice for possible submission in a continuing application. Additionally, dependent claim 23 has been rewritten in independent form and dependent claims 19 and 20 have been amended to depend from rewritten independent claim 23. Rewritten independent claim 23 recites, in pertinent part, a valve housing including a passage defining an inner periphery, a detachable end portion, a valve element sized and shaped to be guidably displaced by the inner periphery of the passage in the housing between open and closed positions, a biasing element urging the valve element toward the closed position, a retainer element including a plurality of arm segments engaged against the detachable end portion adjacent the region of reduced strength to initially maintain the valve element in the open position, and wherein imposition of a force onto the detachable end portion results in at least partial detachment from the valve housing along the region of reduced strength and "causing at least one of said plurality of arm segments to disengage said detachable end portion to permit said biasing element to displace said valve element toward said closed position."

The Applicant submits that the '926 patent fails to teach or suggest each and every feature recited in rewritten independent claim 23. For example, as discussed above, the '926

patent fails to teach or suggest that at least partial detachment of a detachable valve portion from the valve housing causes at least one of a plurality of arm segments associated with a retainer element to disengage the detachable end portion to permit a biasing element (e.g., a spring) to displace a valve element toward a closed position. To the contrary, the '926 patent teaches that detachment of the upper portion of the valve results in pivotal movement of the pawl elements 101, which in turn disengage the dished collar 95 from the notched ends 99 of the pawl elements 101 to thereby allow the valve element 61 to close. Indeed, it is the engagement between the end portions of the pawl elements 101 and the inner surface of the upper portion of the valve that causes the valve element 61 to close, and not the disengagement of the pawl elements 101 from the upper portion of the valve. Additionally, the '422 patent also fails to disclose or suggest the elements and features recited in original independent claim 15 and in rewritten independent claim 23 that relate to the structural and operational configuration of the retaining element.

For at least the reasons discussed above, the '926 patent and the '422 patent fail to disclose the elements and features recited in rewritten independent claim 23, whether considered alone or in combination. Claims 19-22 and 24 depend from rewritten independent claim 23 and are patentable for at least the reasons supporting the patentability of independent base claim 23. Accordingly, the Applicant respectfully requests withdrawal of the rejection of rewritten independent claim 23 and claims 19-22 and 24 depending therefrom.

CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that the Applicant's application is now in condition for allowance with pending claims 2-14 and 16-30.

Reconsideration of the subject application is respectfully requested. Timely action towards a Notice of Allowability is hereby solicited. The Examiner is encouraged to contact the undersigned by telephone to resolve any outstanding matters concerning the subject application.

Respectfully submitted,

By: 

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